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AUTHOR Thorson, Esther
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ABSTRACT

In an examination of the way people store and retrieve information from advertising, this paper draws a distinction between "semantic" memory, which stores general knowledge about the world, and "episodic" memory, which stores information about specific events. It then argues that episodic memory plays a more significant role in advertising's effects than has been previously thought. The paper applies episodic memory to questions concerning the role that emotional appeals play in influencing memory, choice, and purchase, concluding that conceptualizing emotional effects in terms of the episodic memory model is both consistent with the psychological literature on memory and useful in understanding how emotion operates in the persuasive process. (FL)

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# Episodic and Semantic Memory: Implications for the Role of Emotion in Advertising

Esther Thorson
School of Journalism and Mass Communication
University of Wisconsin-Madison

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Episodic and Semantic Memory: Implications for the Role of Emotion in Advertising


## Abstract

The distinction between episodic and semantic memory is elaborated and applied to consumer processing of advertising messages. It is argued that episodic memory, the storage of information about specific events, probably plays a more significant role in advertising's effects than has been attributed to it. Episodic memory is then applied to questions concerning the role that emotional appeals play in influencing memory, choice, and purchase. It is concluded that conceptualizing emotional effects in terms of an episodic memory model is consistent with the psychological literature on memory, and adds to our understanding of how emotion operates in the persuasive process.

Episodic and Semantic Memory: Implications for the Role of Emotion in Advertising

This paper is a critique of the way in which we have been thinking about how people store and retrieve information from advertising. It will suggest that while much of our theorizing about advertising assumes what psychologists have termed semantic memory structure, most of our research is designed to index episodic memory structure. The distinctions between episodic and semantic memory will be elaborated, and then applied to a matter of considerable current interest to advertising researchers--the role of emotion in persuasive messages.

## Episodic and Semantic Memory Processes

A memory researcher named Endel Tulving (1972) first argued that a distinction should be made between memory that stores information about specific events experienced by a person, and memory that stores general knowledge about the world. The first kind of memory he termed episodic, and the second, semantic. Since then, considerable controversy has developed about whether the two kinds of memory are actually separate (Atkinson, Herrmann, & Wescourt, 1974; Crowder, 1976; Herrmann & McLaughlin, 1973; Shoben, Wescourt, & Smith, 1978), or whether the distinction is really just a useful way to classify different kinds of knowledge (Anderson & Bower, 1973; McKoon & Ratcliff, 1979; McCloskey & Santee, 1981). Under either interpretation, the distinction has proved to be an important one to psychologists studying memory (Lachman, Lachman, & Butterfield, 1979; Kintsch, 1977; Klatzky, 1980; Seamon, 1980).

Actually, the classification "semantic" memory may not be sufficiently detailed. As Rabinowitz & Mandler (1983) have pointed out, even within semantic memory there seem to be variations in the kind of organization used. The two

kinds of organization that have been most clearly demonstrated are the taxonomic--classified in terms of natural relations among things (e.g., animals are classified into birds, mammals, reptiles, and so on), and schematic--classified in terms of rules about what things usually go together (e.g., the steps you go through to order food in a restaurant, or the things you usually see in an office.)

Advertising and the Episodic-Semantic Distinction

Bettman (1979) in a review of memory research relevant to marketing mentioned both episodic and semantic memory, but placed emphasis only upon the latter. Nevertheless, both kinds of memory structure are relevant to our understanding of consumer responses to advertising. To demonstrate this, let's think about what models of advertising suggest happens between exposure and purchase. Most of the models are hierarchical in nature, that is, they assume an ordered series of steps that the information processor completes (e.g., Lavidige & Steiner, 1961; McGuire, 1978). In the present analysis we shall use as an example one of the most detailed of such models, the Association Model described by Preston (1982).

Preston's model suggests that upon ad exposure, three kinds of consumer awareness occur--ad elements, product, and associational. Awareness of ad elements includes the registration of what is going on in the ad. Product awareness is the registration of product category, and perhaps brand name. Association awareness involves the registration of relations between the product and any attributes the advertiser has chosen to describe it as having. These attributes may be inherent ones such as the cleaning power of soap, or non-inherent ones such as the "liveliness" of a soft drink.

The next three steps of the model, in order of occurrence, are product perception, evaluation, and stimulation toward purchase. Each of these steps involves three kinds of information storage. The product perceptions, evaluations, and stimulations held by the consumer before seeing the ad are termed prior. The product perceptions, evaluations, and stimulations resulting immediately from seeing the ad are termed ad. And the putting together of these two sets of information is termed integrated. For example, a consumer may have perceptions, evaluations, and stimulations toward an established brand. He will then acquire additional perceptions, evaluations, and stimulation responses to the brand when he views an ad for it. After viewing the ad he will put these together, producing integrated perceptions, evaluations, and stimulations. It is then the integrated stimulation that leads to the final stage of the model, action.

An interesting aspect of Preston's model is that with a few changes in assumptions, it includes both episodic and semantic memory. The elements of ad awareness are episodic. If the consumer needs to know what he saw in an ad, he must go back to his experience in time with the ad. "First there were two ladies talking about a problem with greasy fried foods. Then one lady suggested Crisco would alleviate the problem. She tested it and found her fried chicken less greasy. She said Crisco makes frying a less greasy way to cook her favorite foods." This is episodic memory.

Product perceptions from the ad are also episodic. From watching or from remembering the ad, the consumer has a total, nonevaluative picture of the product. Likewise, product evaluation and stimulation from the ad are episodic in nature, so long as they are traced back to the experience of encountering the ad.

Prior perception, evaluation, and stimulation, however, are not so easily categorized. To the extent these memories simply involve other ads for the product, they too are episodic. But if the consumer has taken information from the ads and organized it into one or many taxonomic categorizations of products, or if he has taken previous ads and integrated their general schematic structure with that of other ads, then the memory is semantic. In short, any active organizing or reorganizing of responses to advertising or of information in advertising involves semantic memory.

Finally, integrated perception, evaluation, and stimulation may also be either episodic or semantic or both. If the consumer integrates by saying Brand X used to be represented by Lou Rawls and now is represented by Frank Sinatra, this is an episodic memory process. If the consumer integrates the idea that Lysol is a general purpose household cleanser rather than just a disinfectant, the process is semantic.

So, to the extent that the Association Model captures the processing of advertising, both episodic and semantic memory are involved. Indeed, in a recent updating of the Association Model (Preston & Thorson, in press) it has been suggested that the consumer may sometimes fail to experience integrated processing, passing only through ad perception, evaluation, and stimulation, and directly to action. This possibility seems particularly reasonable under low involvement conditions where there is no motivation for the consumer to organize product information. He just experiences ads, stores the experiences as episodes, and the episodes themselves influence his eventual purchasing behavior. This would be an entirely episodic process, and under this circumstance, episodic remembering would be the phenomenon of interest to the advertising researcher.

But do ad researchers ever study such a process? Clearly the answer is "yes." Twenty-four hour recall is a memory task designed to index episodic memory. Consider the interview questions. "Did you watch Hill Street Blues last night? Did you see an ad for paper towels? Tell me everything you can about that ad." These are questions about episodes and they index episodic memory processes.

The problem with these and related memory measures of ad effectiveness, however, is that they do not test anything except the stage of advertising awareness (Preston, 1982; Ross, 1982; Gibson, 1983). So now we consider research on the subsequent stages, and here the literature is enormous. It includes the many tests of attitude formation (e.g., Axelrod, 1968; Holbrook, 1978; Fishbein & Ajzen, 1975). It includes tests of consumer capacities for handling the information contained in advertising (e.g., Summers, 1974; Wilkie, 1974; Jacoby, Speller, & Berning, 1974; Bettman & Kakkar, 1977). It includes studies of consumer product knowledge (Johnson & Russo, 1978), brand preferences and saliency (Holman & Hecker, 1983), perceptions of advertising informativeness (Stern, Krugman, & Resnik, 1981), and many others. Unfortunately, most of this literature involves research techniques that force the consumer to operate with semantic memory. For example, a typical research task for the consumer would be to read a group of ads and decide which advertised product he would prefer. Or, in the many tests of Fishbein's multiattribute model of attitude formation (Lutz, 1975; Bagozzi, 1981; Ajzen & Fishbein, 1973) the consumer is usually asked to list dimensions of a product, estimating his belief the product has certain values on each dimension, and evaluating how important each dimension is to his own buying behavior. These are tasks for semantic, not episodic memory.

For high involvement situations where the consumer is motivated to develop elaborate semantic memory structures that interrelate product information, such an approach is justified. But for the more typical instance of storing the hundreds of messages with which the consumer is bombarded every day, the approach is not justified.

Emotional Advertising and the Episodic-Semantic Distinction

There are many implications that could be drawn from the analysis of advertising effects as involving both episodic and semantic memory. In the present paper, however, we shall turn to just one specific problem, namely the role that emotion in an ad plays in advertising effectiveness. This topic has been appearing with increased frequency in the advertising literature (Mitchell, 1983; Percy & Rossiter, 1983; Srull, 1983; Moore & Hutchinson, 1983), and indeed, with the rise in "image" or "emotional" advertising, the problem is clearly a relevant one.

There are two main research approaches to the effects of emotion in advertising. One falls under the rubric of "attitude toward the ad" (MacKenzie & Lutz, 1982; Mitchell & Olson, 1981; Moore & Hutchinson, 1983). The other concerns the comparative utility of day-after recall testing (DAR) to evaluate emotional and informational ads. And, just as we found that much of advertising research has in general studied primarily semantic memory, we find the same influence in the emotional research areas.

"Attitude toward the ad" ($A_{ad}$) is a measure of how much a consumer reports liking an advertisement. Often an ad that creates a positive liking or emotion in a consumer is one that does so using visuals (Mitchell, 1983) or music (Gorn, 1982), rather than verbal information. It has been argued that although attitude

toward an ad should not affect product attitudes if the consumer were rational, it nevertheless does appear to do so (Mitchell & Olson, 1981; Lutz, 1983). Interestingly, however, all of the theorizing about $A_{ad}$ has assumed semantic memory processing. Most often this has been posed in terms of an addition to Fishbein's multiattribute model (Moore & Hutchinson, 1983), or as an additional node in a semantic network representing product information (Mitchell, 1983). In either case, the processing assumes that only semantic memory is relevant.

But here again, might it not be that an episodic model would better handle the ubiquitous low involvement cases? If indeed, these instances only or primarily involve episodic storage, neither the Fishbein model nor semantic networks are appropriate. Instead, we should turn to the episodic models of memory, and ask how they would handle affective responses to ads. Here the rationality of the consumer is not called into question. There is clear evidence that episodic memory structure lays down traces of many aspects of the informational context. For example, we have probably all had the experience of seeing someone we know out of his usual context, and had difficulty remembering his name. This phenomenon has been captured in the psychology laboratory and termed encoding specificity (Tulving & Osler, 1968; Thomson & Tulving, 1970; Wiseman & Tulving, 1976). It means that information is better recalled when the context in which it was learned is reinstated. Indeed, encoding specificity emphasizes the importance of episodic processes for remembering.

A number of models have been introduced to account for encoding specificity, but the most successful and parsimonious ones are the Associative Coding models (Estes, 1979; Melton & Martin, 1972). Basically, these simple models state that when an episode occurs, codes for many aspects of the episode become linked with

each other. For emotional advertising, the (positive-negative) valence and the intensity of the emotion experienced by the consumer are encoded right along with what happens in the ad, the product in the ad, and the attributes the ad associates with the product. Certainly, then, consumer memory for an emotional ad will involve memory of how he felt when he watched it. And, to the extent that semantic memory operations are bypassed, it will be the emotion-coded episodic trace that operates at the time of purchase. This conceptualization predicts that the effects of emotional advertising will be greater under low involvement (using episodic memory) than high involvement processing (using primarily semantic memory), and indeed this has been shown to be the case (e.g., Olson & Mitchell, 1981; Chaiken, 1980; Gorn, 1982). While Mitchell (1983) has explained the involvement difference in terms of "verbal" vs. "visual" processing, with verbal processing operating only under high involvement conditions, it is more consistent with what we know about episodic and semantic knowledge to ascribe the results to the differences in the episodic and semantic memory systems.

Of course, there is no doubt that semantic memory also stores emotion (Bower & Cohen, 1982; Lang, 1983), but the use of emotions to make action decisions via conscious semantic processing seems unlikely. For example, if a consumer is weighing various automobiles against each other, he probably wouldn't think about how he felt toward a Toyota ad. Although he might like the appearance of a Toyota and think he would enjoy being seen in one, these are no longer ad-bound emotions, but rather consciously evaluated dimensions of attitude. On the other hand, purchase of a bar of Caress soap is probably not preceded by development of semantic memory structures. The behavior would be seen as resulting simply from the episodically stored associational links between brand and liking.

A second area of research on emotional advertising concerns the comparative strength of memory for emotional and rational advertising. Most cited in this literature is Zielske's (1981) study, which purported to show that emotional ads have lower DAR scores than do rational ads. Although there appear to be methodological problems with the study (Thorson & Choi, 1983), perhaps more importantly, the study reflects an instance of using an episodic memory task (the DAR), but applying a semantic model to its analysis. Zielske suggested that emotional ads are less well remembered because after viewing them the consumer stores feelings and images rather than words. Because, he says, the DAR task is a verbal one, emotional ads will score poorly on it. Zielske sees the task for DAR respondents as being the organized storage of product information--i.e., semantic memory. But instead, let's look at the phenonemon as an instance of episodic memory. In rational ads, the consumer lays down a trace of the ad elements, the product, and its associations. No emotional trace is laid down. In emotional ads, the same elements are laid down, but there is the addition of valence and intensity of emotion experienced during viewing. Encoding specificity models would all predict more probable remembering of the emotional ads because there are more trace elements that could be used during retrieval (e.g, Thomson & Tulving, 1970). While Zielske showed opposite results--the rational ads were more often recalled then the emotional ones--the small and unusual sample of commercials he used (Berger, 1981) argue against the validity of the study. Numerous other studies support the predictions of episodic encoding models (Mitchell & Olson, 1981; Gorn, 1982; Thorson & Choi, 1983).

Some Preliminary Conclusions

Many questions remain to be asked about episodic and semantic memory in general. Are they indeed separate memory processes? What kinds of transference

mechanisms operate between them? What are the differences in how they affect choice behavior? As our knowledge about these two memory processes grows, the distinction should become an increasingly important one for advertising researchers to consider. The distinction would aid in categorizing different kinds of experimental tasks given to consumers. It would also enhance the sophistication of theorizing about how advertising works in general, and in how specific aspects of advertising, such as emotional appeal, influence consumer processing. The complexity of human memory as a mediator of advertising effects demands that we develop adequate theoretical underpinnings for our research on ad effects.

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